

Assignment: Blood Pressure Measurement (OSCE Guide)

Q1. List the essential equipment required for measuring blood pressure and explain why the correct cuff size is important.

Model Answer:

- **Essential equipment:** * Stethoscope
 - Sphygmomanometer (manual or aneroid) with appropriate cuff size
- **Importance of cuff size:** * A cuff too small may overestimate blood pressure.
 - A cuff too large may underestimate blood pressure.
 - Correct cuff size ensures accurate and reliable measurement.

Q2. Describe the step-by-step procedure to estimate the approximate systolic blood pressure before performing accurate measurement.

Model Answer:

- Ensure the cuff valve is closed.
- Palpate the patient's radial pulse at the wrist.
- Inflate the cuff until the radial pulse is no longer palpable.
- Note the reading at which the pulse disappears → this is the approximate systolic BP.
- Deflate the cuff completely before proceeding to accurate measurement.

Q3. What are Korotkoff sounds? Which sounds represent systolic and diastolic blood pressure, and how are they identified during measurement?

Model Answer:

- **Korotkoff sounds** are pulsatile sounds heard over an artery using a stethoscope during gradual deflation of a BP cuff.
- **First Korotkoff sound** → represents Systolic BP (point at which pulsatile sounds first appear).
- **Fifth Korotkoff sound** → represents Diastolic BP (point at which pulsatile sounds disappear).

Q4. Define the following abnormalities in blood pressure and mention one clinical condition associated with each:

Model Answer:

- **Hypertension:** BP $\geq 140/90$ mmHg (<80 years) or BP $\geq 150/90$ mmHg (≥ 80 years).
 - **Example:** Essential hypertension.
- **Hypotension:** BP $< 90/60$ mmHg.
 - **Example:** Shock.
- **Narrow pulse pressure:** Difference between systolic & diastolic <25 mmHg.
 - **Example:** Aortic stenosis, cardiac tamponade.
- **Wide pulse pressure:** Difference >100 mmHg.
 - **Example:** Aortic regurgitation, aortic dissection.

Q5. Outline the steps to be followed after completing a blood pressure measurement, including communication with the patient and documentation.

Model Answer:

- Remove the cuff and thank the patient.
- Explain the results clearly to the patient in simple terms.
- If abnormal, discuss further steps (e.g., repeat measurement, investigations, treatment).
- Dispose of PPE appropriately and wash hands.
- Document the lowest BP reading in the patient's notes.